

PATENT COOPERATION TREATY

PCT

REC'D 14 DEC 2005

WIPO

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P24393PC00	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/NO2004/000310	International filing date (day/month/year) 13.10.2004	Priority date (day/month/year) 14.10.2003
International Patent Classification (IPC) or national classification and IPC See Supplemental Box		
Applicant Devilray AS et al		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

Date of submission of the demand 11.07.2005	Date of completion of this report 23.11.2005
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Björn Lindkvist / JA A Telephone No. +46 8 782 25 00

Form PCT/IPEA/409 (cover sheet) (April 2005)

BEST AVAILABLE COPY

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2004/000310

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of: **Cover sheet**

A63B 53/04 (2006.01)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2004/000310

Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1 - 10 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* 1 - 4 received by this Authority on 10.11.2005
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages 1 - 5 as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/NO2004/000310

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-13</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-13</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-13</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

This report has been based on the new claims 1-13 filed with the letter of 2005-11-14.

The claimed invention

The claimed invention relates to a club head for a golfing putter, more particularly a putter head which is wing-shaped, seen from above, and exhibits a large moment of inertia about a horizontal axis (z-axis) and about a vertical axis (x-axis) through the mass centre of the putter relative to the mass of the club head. This means reduced loss in speed and direction if the golf ball is hit by the putter outside the putter's "sweet spot" (the point on the striking face located on the line of movement of the centre of gravity of the club head).

The following documents have been cited in the International Search Report

D1: US 5 830 078 A

D2: JP 5-137820 A

The documents cited in the International Search Report represent the prior art. The claimed invention stated in claims 1-13 is not considered to be anticipated by these documents. None of the documents or any relevant combination of them reveals a golf head for a golfing putter as described by these claims.

According to the arguments stated above, the invention claimed in claims 1-13 is novel, considered to involve an inventive step and has industrial applicability

Patent application no. PCT/NO2004/000310
Applicant Devilray AS
Date November 10, 2005

! U -11- 2005

A m e n d e d C l a i m s

1. A golf club head (21) for a putter club, in which the club head (21) is provided with a toe wing (31) projecting from a toe portion (23), and a heel wing (31') projecting from a heel portion (25), the wings (31, 31') being each provided with an outward side surface (37), the side surfaces (37) diverging relative to each other in a direction away from a striking face (27), characterized in that
 - a substantial portion of the moment of inertia of the toe wing (31) and the heel wing (31') around a vertical axis coinciding with the club head centre of mass, is obtained by the mass of the rear end portion (45) of the wing (31, 31'),
 - the mass per length unit of the end portion of each wing (31, 31') being substantially larger than the mass per length unit of adjacent mid portions of the wings (31, 31');
 - and that at least one bracing means (65, 71, 71') is secured to the rear end portion (45) of either wing (31, 31').
2. A golf club head (21) in accordance with claim 1, characterized in that to a mid portion (29', 75) of the golf club head (21) there is secured at least one bracing means (65, 73).
3. A golf club head (21) in accordance with claim 1, characterized in that the golf club head (21) includes an intermediate plate (65) filling

the space between the lower portions (35) of the wings (31, 31').

4. A golf club head (21) in accordance with claim 1, characterized in that cross stays (71, 71') connect the rear end portions (45) of the wings (31, 31').
5. A golf club head (21) in accordance with claim 1, characterized in that cross stays (71, 71'), connecting the rear end portions (45) of the wings (31, 31'), are rigidly connected by a stabilizing stay (73) to the mid portion (75) of the golf club head (21).
6. A golf club head (21) in accordance with claim 1, characterized in that each of the wings (31, 31') has an inward-facing, rectilinear side edge portion (39) lying essentially parallel to each other and being, in a horizontal plane, essentially at right angles to the striking face (27).
7. A golf club head (21) in accordance with claim 5, characterized in that the rectilinear side edge portion (39) has an extent of at least 10 mm.
8. A golf club head (21) in accordance with claim 1, characterized in that the mass centre of the club head (21) is positioned lower than the centre of the striking face (27).

9. A golf club head (21) in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t t h e t o e p o r t i o n
(23) and the heel portion (25) have an L-shaped cross-
section, a lower portion (55) thereof projecting es-
sentially horizontally in a direction away from the
striking face (27).

10. A golf club head (21) in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t a m i d d l e p o r t i o n
of each of the wings (31, 31') has an L-shaped cross-
section, a bottom portion (35) thereof projecting
essentially horizontally in a direction away from the
outer side surface (37).

11. A golf club head (21) in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t t h e r e a r p o r t i o n s
(45) of the club head (21) are formed essentially by a
material of a specific gravity of more than $3,5 \text{ kg/dm}^3$
and the front portions (23, 25, 27) of the club head
(21) are formed essentially by a material of a spe-
cific gravity of less than $3,5 \text{ kg/dm}^3$.

12. A golf club head (21) in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t t h e l o w e r p o r -
tions (29', 35, 55) of the club head (21) are formed
essentially by a material having a specific gravity of
more than $3,5 \text{ kg/dm}^3$ and the upper portions (29, 47)
of the club head (21) are formed essentially by a ma-
terial of a specific gravity of less than $3,5 \text{ kg/dm}^3$.

13. A golf club head (21) in accordance with claim 1,
c h a r a c t e r i z e d i n t h a t t h e r e a r a n d
outer portions (45) of the club head (21) are formed

essentially by a material of a specific gravity larger than $3,5 \text{ kg/dm}^3$ and the middle portions (29, 29', 75) of the club head (21) are formed essentially by a material of a specific gravity of less than $3,5 \text{ kg/dm}^3$.